Hospital Registry Perform Abstracting for a New Reportable Case Use Case

Version 1.0

Prepared by: NPCR–MERP Hospital Workgroup

NPCR–MERP Technical Development Team

Centers for Disease Control and Prevention

National Center for Chronic Disease Prevention and Health Promotion

Division of Cancer Prevention and Control

National Program of Cancer Registries

October 22, 2007

Table of Contents

General Information

1. Use Case ID

HUC 1.5

2. Use Case Name

Perform Abstracting for a New Reportable Case

3. Description

This use case creates a composite record of cancer information that is complete and accurate for use by clinicians, researchers, data standards organizations, and other interested stakeholders.

4. Actors

- Registrar
- Cancer registry (CR) software

5. Definitions

The following database table names are used within the use cases.

- **ToBeProcessed Table:** Event reports that have been submitted to the registry for casefinding, abstracting, and follow-up.
- **ToBeAbstracted Table:** Event reports that need abstracting.
- **PendingInformation Table**: Event reports for which we have requested more information.
- **PendingInformationTracking Table**: Maintains information regarding a request for more information and the result of the request.
- **ArchivedEventReports Table:** Event reports that don't match a cancer case in the registry.
- **CorrectedEventReports Table:** Updated versions of previously submitted event reports.

Perform Abstracting

Note: Diagrams for this use case are in Appendix A and Appendix B.

1.0 Preconditions

A set of conditions that must be met before the activities described in the use case can begin.

The report has been confirmed as an event that contributes to a reportable cancer and is available in the ToBeAbstracted database table.

2.0 Post Conditions

A set of conditions that must be met after the activities described in the use case have been completed.

Required data item values have been inserted into the cancer abstract within the registry database.

3.0 Priority

Describes the importance and sequence of the use case in the overall activities of the cancer registry.

This use case is of primary importance in the overall activities of the cancer registry.

4.0 Frequency of Use

Describes how often the activities in the use case take place.

Activities of this use case take place daily.

5.0 Normal Course of Events

Describes the specific steps taken to perform the activity in the use case.

Normal refers to the steps that are taken when everything goes according to routine procedures. Problems and exceptions are described in section 6, Alternative Course.

Business rules are statements that describe a decision that must be made and agreed to by those involved in the activity. In the context of this document, a business rule describes the decision that needs to be made, and in some circumstances provides a recommendation; in others, options for consideration and use.

Software requirements are statements that describe the functionality of the software that is required or recommended.

5.1 The use case begins by processing event reports that contribute to a reportable cancer case.

5.2 The registrar selects a new reportable cancer case that is ready to be abstracted. [BR01]

BR	Business Rule	Purpose	Remarks
01	The abstracting function should be performed at regular intervals. See Appendix C.	To ensure timely processing of data.	There is no standard timeline; each registry creates this timeframe based on how and when source reports are available to the registry electronically.

5.3 CR software processes any pending event reports for this case by performing casefinding and passive follow-up (HUC 1.4).

This step will identify and collect any reports that have been inserted into the ToBeProcessed table for the selected case but have not been processed by the time the registrar is ready to abstract the case. (If a registry performs casefinding every day, additional event reports will most likely not be identified.)

5.4 CR software creates and automatically populates a new cancer abstract with data items from the event reports in the ToBeAbstracted table. [BR02] [SR01, SR02, SR03]

BR	Business Rule	Purpose	Remarks
02	The registrar determines which data items can be populated automatically. See Appendix D.	To reduce the number of data items that must be abstracted manually.	This is a registry-specific decision and may depend on the quality of the event report or the complexity of the abstracting rules for the data item. Abstracting rules are found in the Commission on Cancer's (CoC's) *Facility Oncology Registry Data Standards Manual (FORDS).*

SR	Software Requirement	Purpose	Remarks
01	CR software should not pre-fill data items with default unknown values when the data item is empty.	To ensure accurate data entry.	An empty data item is one for which no value was submitted by the data source. This is not the same as data source not knowing the value.
02	The registrar must be able to overwrite automatically populated data item values.	To ensure accuracy.	
03	CR software must track whether a data item is: • Populated automatically • Reviewed and accepted by the registrar • Inserted by the registrar		

5.5 CR software displays event reports for registrar review. [SR04, SR05, SR06]

SR	Software Requirement	Purpose	Remarks
04	CR software must display a menu of event reports categorized by: • Location (the table in which the event reports reside) • Type of report (such as X-ray, pathology, or operative) • Quantity of that type of report	To ensure all event reports are available for abstracting. To group event reports to improve efficiency.	Establish broad categories such as diagnostic, treatment, and clinician reports and more specific types of reports such as diagnostic, X-ray, and pathology. Display in reverse chronological order. Set a begin date so the registrar doesn't see all of the X-rays performed in a lifetime (selection). **Note:** It is important to select reports from the ArchivedEventReports table also, as negative reports are needed to abstract a cancer case fully.
05	A menu of event reports, the selected event report, and the registry abstract must be displayed simultaneously on the CR software screen.	To ensure efficient and accurate abstracting.	
06	Completion status of each section must be displayed. See step 5.7 for information on completion status.	To ensure completeness of reporting. To indicate data items those require attention.	

5.6 The registrar reviews event reports, validates data items that were populated automatically, and inserts new information in the abstract. [BR03] [SR07, SR08, SR09, SR10, SR11]

5.6.1 The registrar decides if more than one new abstract is needed.

5.6.2 The registrar corrects automatically populated data items as needed.

5.6.3 The registrar inserts new data into the abstract.

BR	Business Rule	Purpose	Remarks
03	CoC rules for abstracting must be followed.		Abstracting rules are found in the CoC's *FORDS* manual.

SR	Software Requirement	Purpose	Remarks
07	CR software should provide a computer-assisted coding function for data items. For example, when a registrar highlights Pathology Diagnosis, the software displays possible ICD-0-3 codes.	To provide assistance in coding.	Examples: Computer-assisted coding for treatment codes CPT and ICD9 procedures to *FORDS* codes.
08	CR software must provide an efficient insert function to select information from the data source record and insert it into the abstract.	To minimize re-abstracting of text and reduce typographical errors.	
09	CR software must validate the accuracy of each data item as it is entered by the registrar.		For data items that are coded, the CR software must ensure a valid code is inserted. CR software must also enforce syntax rules such as capitalization, numeric, or text data fields.
10	CR software should display treatment options based on the primary site of the cancer.	To assist in accurately recording treatment.	
11	CR software should allow the registrar to set treatment data item sets to "not given" with a single action.	To improve the efficiency and accuracy of recording treatment information.	For example, if no radiation therapy is given at this facility, data items should be set to the default values when the registry checks a box marked "Not Given."

5.7 The registrar determines the level of completion and sets the status flag, and the CR software timestamps it. [BR04] [SR12]

BR	Business Rule	Purpose	Remarks
04	The completion status for each section must be defined. See Appendix F.	To ensure completeness of reporting. To indicate data items that require attention.	

SR	Software Requirement	Purpose	Remarks
12	CR software must reset the completion flag when certain data items are edited.		A change in primary site requires that the completion flag be reset for Tumor Characteristics, Stage of Disease, and Treatment.

5.8 CR Software sets reporting / endpoint triggers [BR05] [SR13]

BR	Business Rule	Purpose	Remarks
05	Endpoint triggers for taking a specific action must be defined and may include: • Ready for clinical trial or special study • Send to state or regional cancer registry • Send to the National Cancer Data Base (NCDB) • Include in annual report	To allow a specific action to be taken without requiring the entire abstract to be completed.	Examples of criteria for setting the endpoint trigger include: • NCDB • State registry – When data items for incident reporting are complete. – When a data item is changed.

SR	Software Requirement	Purpose	Remarks
13	CR software must allow the registrar to set the reporting or endpoint trigger manually.	To allow a specific action to be taken without requiring the entire abstract to be completed.	

5.9 CR software electronically files documents in the MatchedEventReports table. [SR14]

SR	Software Requirement	Purpose	Remarks
14	CR software must provide an option to delete event reports as needed.	To eliminate event reports which are not needed.	Reasons for deleting an event report may include: • Duplicate event report • Not reportable • Corrupt data

6.0 Alternative Course of Events

Numbering in this section refers to its associated step above in section 5, Normal Course of Events.

5.6a The registrar determines that more than one new cancer requires abstracting.

5.6a.1 CR software creates and automatically populates a second abstract and the process continues with step 5.6.

5.6b The registrar determines that an event report has an error or is incomplete. [BR06, BR07, BR08, BR09] [SR15, SR16]

5.6b.1 The registrar notifies the data source if event report has incorrect or incomplete data.

5.6b.2 The process continues with step 5.6.

BR	Business Rule	Purpose	Remarks
06	Event reports should be stored in the PendingReports table when the registrar requests additional information.	To ensure that reports with questions are tracked accurately, actions are documented, and pending reports are resolved.	
07	A tracking table to monitor event reports that need further information must include: • Date inserted into the pending reportability database • Event report type • Event report date • Event report ID number • Comments section for describing problem • Comments section for action taken		

08	The request to the data source for additional information should include: • Date of request • Event report type • Event report date • Event report ID number • Patient demographics • Primary site (cancer type) • Information needed, including specific data items that are affected See also [SR08].	To ensure complete and accurate information is returned.	Individual registries may need to add additional or alternate information.
09	The data source should re-submit the corrected or completed event report using the HUC1.1 Prepare and Transmit Event Report use case. If a verbal or e-mailed response is received, it must be stored in electronic form with the originally submitted event report.	To ensure availability of information and meet record retention requirements.	Verbal or e-mailed responses should not be the routine method of receiving information. If the registry is archiving the event reports for future use, it is important to store the corrected or completed report.

SR	Software Requirement	Purpose	Remarks
15	CR software must reset the completion flag when certain data items are edited.		A change in primary site requires that the completion flag be reset for Tumor Characteristics, Stage of Disease, and Treatment.

16	CR software should have a function to e-mail or fax requests for more information to various sources. This function should allow requests for multiple patients to one physician to be faxed as one document.	Automating the process decreases turnaround time.	Physician response was high because the fax could be processed on their time schedule rather than responding to a phone call when it arrives. Hardware and software options: Adding a modem fax board to the computer or external fax modem allows registrars to fax letters immediately, including letters generated by the software. Various software applications provide the ability to fax letters.

7.0 Business Rules and Software Requirements

A statement that describes a decision that must be made and agreed to by those involved in the activity. In the context of this document, a business rule describes the decision that needs to be made, and in some circumstances provides a recommendation; in others, options for consideration and use.

Business rules for this use case are presented under the step to which they apply.

Software requirements are identified in the context of enhancing and improving current cancer registry software. They are not a complete requirements list from which a new software package can be developed.

BR	Business Rule	Purpose	Remarks
01	The abstracting function should be performed at regular intervals. See Appendix C.	To ensure timely processing of data.	There is no standard timeline; each registry creates this timeframe based on how and when source reports are available to the registry electronically.
02	The registrar determines which data items can be populated automatically. See Appendix D.	To reduce the number of data items that must be abstracted manually.	This is a registry-specific decision and may depend on the quality of the event report or the complexity of the abstracting rules for the data item. Abstracting rules are found in the Commission on Cancer's (CoC's) *Facility Oncology Registry Data Standards Manual (FORDS).*
03	CoC rules for abstracting must be followed.		Abstracting rules are found in the CoC's *FORDS* manual.
04	The completion status for each section must be defined. See Appendix F.	To ensure completeness of reporting. To indicate data items that require attention.	
05	Endpoint triggers for taking a specific action must be defined and may include: • Ready for clinical trial or special study • Send to state or regional cancer registry • Send to the National Cancer Data Base (NCDB) • Include in annual report	To allow a specific action to be taken without requiring the entire abstract to be completed.	Examples of criteria for setting the endpoint trigger include: • NCDB • State registry – When data items for incident reporting are complete. – When a data item is changed.

06	Event reports should be stored in the PendingReports table when the registrar requests additional information.	To ensure that reports with questions are tracked accurately, actions are documented, and pending reports are resolved.	
07	A tracking table to monitor event reports that need further information must include: • Date inserted into the pending reportability database • Event report type • Event report date • Event report ID number • Comments section for describing problem • Comments section for action taken		
08	The request to the data source for additional information should include: • Date of request • Event report type • Event report date • Event report ID number • Patient demographics • Primary site (cancer type) • Information needed, including specific data items that are affected See also [SR08].	To ensure complete and accurate information is returned.	Individual registries may need to add additional or alternate information.

09	The data source should re-submit the corrected or completed event report using the HUC1.1 Prepare and Transmit Event Report use case. If a verbal or e-mailed response is received, it must be stored in electronic form with the originally submitted event report.	To ensure availability of information and meet record retention requirements.	Verbal or e-mailed responses should not be the routine method of receiving information. If the registry is archiving the event reports for future use, it is important to store the corrected or completed report.

SR	Software Requirement	Purpose	Remarks
01	CR software should not pre-fill data items with default unknown values when the data item is empty.	To ensure accurate data entry.	An empty data item is one for which no value was submitted by the data source. This is not the same as data source not knowing the value.
02	The registrar must be able to overwrite automatically populated data item values.	To ensure accuracy.	
03	CR software must track whether a data item is: • Populated automatically • Reviewed and accepted by the registrar • Inserted by the registrar		

04	CR software must display a menu of event reports categorized by: • Location (the table in which the event reports reside) • Type of report (such as X-ray, pathology, or operative) • Quantity of that type of report	To ensure all event reports are available for abstracting. To group event reports to improve efficiency.	Establish broad categories such as diagnostic, treatment, and clinician reports and more specific types of reports such as diagnostic, X-ray, and pathology. Display in reverse chronological order. Set a begin date so the registrar doesn't see all of the X-rays performed in a lifetime (selection). **Note:** It is important to select reports from the ArchivedEventReports table also, as negative reports are needed to abstract a cancer case fully.
05	A menu of event reports, the selected event report, and the registry abstract must be displayed simultaneously on the CR software screen.	To ensure efficient and accurate abstracting.	
06	Completion status of each section must be displayed. See step 5.7 for information on completion status.	To ensure completeness of reporting. To indicate data items those require attention.	
07	CR software should provide a computer-assisted coding function for data items. For example, when a registrar highlights Pathology Diagnosis, the software displays possible ICD-0-3 codes.	To provide assistance in coding.	Examples: Computer-assisted coding for treatment codes CPT and ICD9 procedures to *FORDS* codes.
08	CR software must provide an efficient insert function to select information from the data source record and insert it into the abstract.	To minimize re-abstracting of text and reduce typographical errors.	
09	CR software must validate the accuracy of each data item as it is entered by the registrar.		For data items that are coded, the CR software must ensure a valid code is inserted. CR software must also enforce syntax rules such as capitalization, numeric, or text data fields.

10	CR software should display treatment options based on the primary site of the cancer.	To assist in accurately recording treatment.	
11	CR software should allow the registrar to set treatment data item sets to "not given" with a single action.	To improve the efficiency and accuracy of recording treatment information.	For example, if no radiation therapy is given at this facility, data items should be set to the default values when the registry checks a box marked "Not Given."
12	CR software must reset the completion flag when certain data items are edited.		A change in primary site requires that the completion flag be reset for Tumor Characteristics, Stage of Disease, and Treatment.
13	CR software must allow the registrar to set the reporting or endpoint trigger manually.	To allow a specific action to be taken without requiring the entire abstract to be completed.	
14	CR software must provide an option to delete event reports as needed.	To eliminate event reports which are not needed.	Reasons for deleting an event report may include: • Duplicate event report • Not reportable • Corrupt data
15	CR software must reset the completion flag when certain data items are edited.		A change in primary site requires that the completion flag be reset for Tumor Characteristics, Stage of Disease, and Treatment.
16	CR software should have a function to e-mail or fax requests for more information to various sources. This function should allow requests for multiple patients to one physician be faxed as one document.	Automating the process decreases turnaround time.	Physician response was high because the fax could be processed on their time schedule rather than responding to a phone call when it arrives. Hardware and software options: Adding a modem fax board to the computer or external fax modem allows registrars to fax letters immediately, including letters generated by the software. Various software applications provide the ability to fax letters.

8.0 Exceptions

None.

9.0 Includes

None.

10.0 Special Requirements

None.

11.0 Assumptions

This use case is based on the following assumptions:

1. It is being developed following the Health Insurance Portability and Accountability Act (HIPAA) rules and regulations.
2. Software is time-sensitive. Data source information systems, the cancer registry system, and the registrar can identify trigger points for action.
3. The registrar can change the results of any automated action manually.

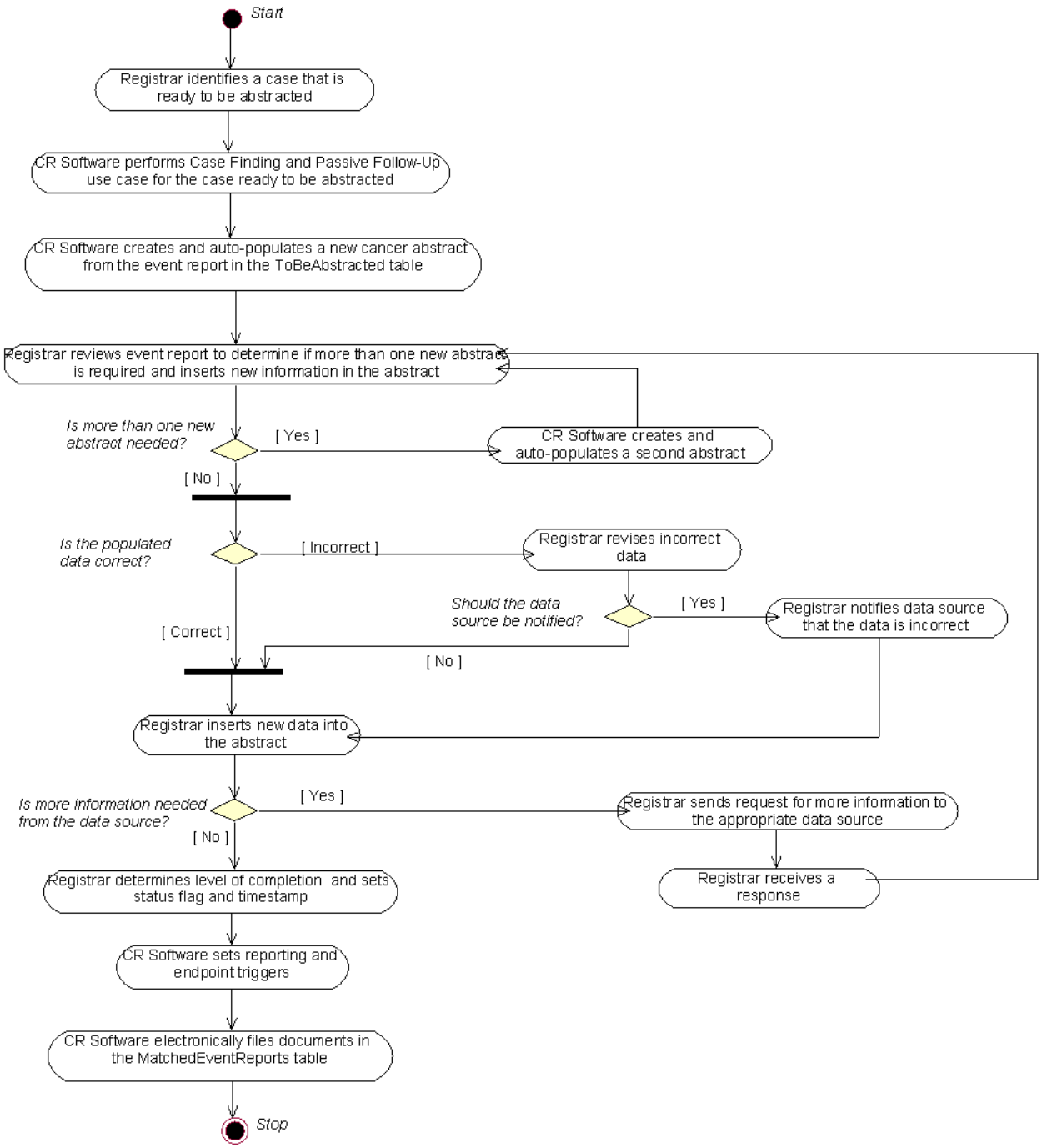
12.0 Notes and Issues

None.

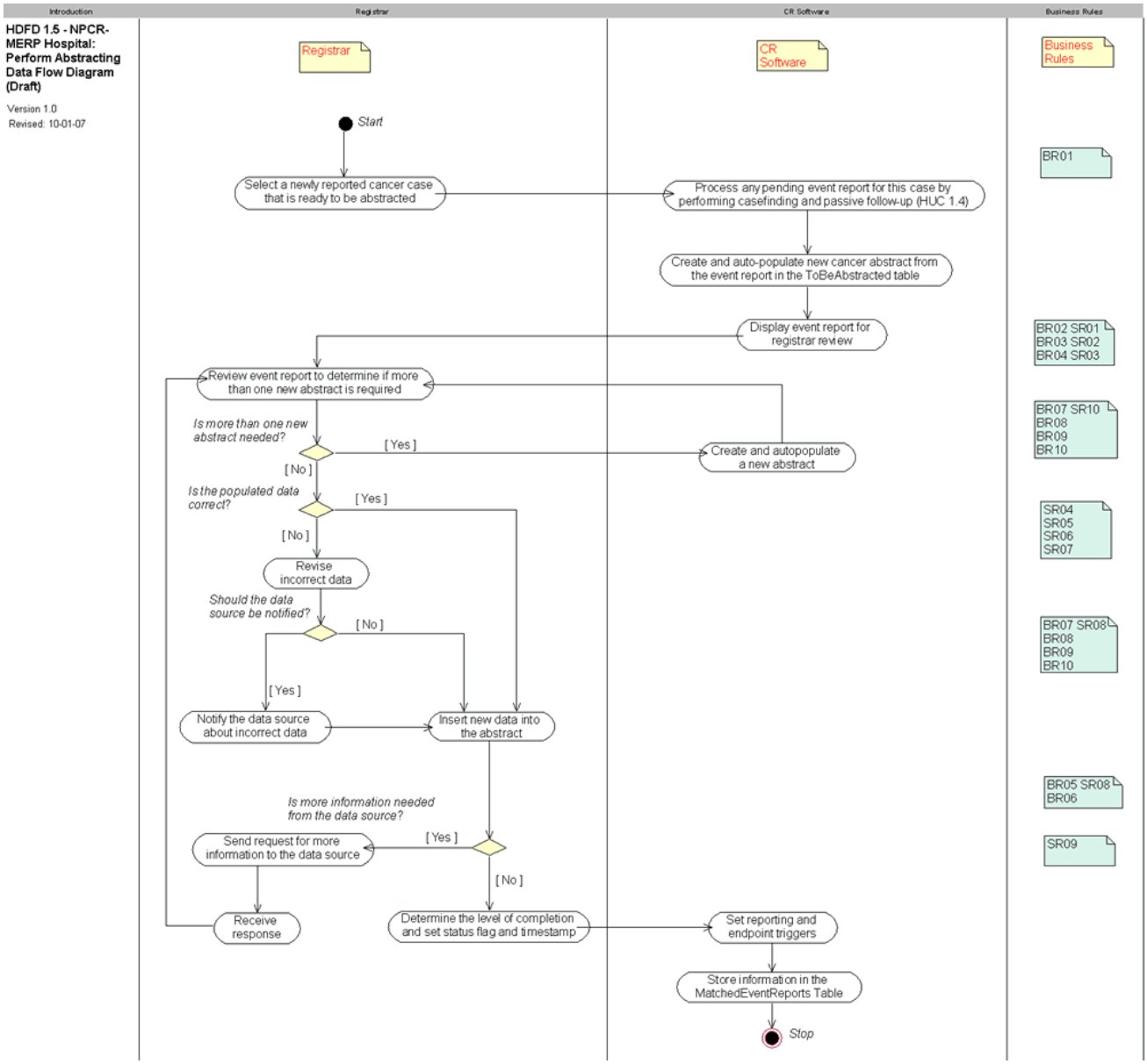
13.0 References

None.

Appendix A: Perform Abstracting Workflow Diagram



Appendix B: Perform Abstracting Data Flow Diagram



Appendix C: Data Source Reports and Timeframe for Initiating Review as Part of the Abstracting Process

Data Source Can be either hospital or freestanding facilities	**Report**	**Timeframe for Review by CTR**
Business office	Admission file	Monthly
Hospital disease index	ICD9-CM Index of Diseases	Monthly
Medical record		
Diagnostic imaging	• X-ray • CT scan • MRI scan • PET scan	Presence of report
Pathology	• Surgery • Flow cytometry • Non-gynecologic cytology • Autopsy • Bone marrow • Peripheral smear • Outside slide review	Presence of report
Treatment logs	• Surgery • Chemotherapy • Gamma knife • Tomo therapy	To be determined
Oncology clinic	• Appointment log • Clinician notes	To be determined
Radiation center specialty database	List of patients	To be determined
Physician office	Clinician notes	To be determined
Regional Health Information Organization (RHIO)	To be determined	To be determined
Tissue bank data	To be determined	To be determined

Appendix D: Automatically Populating (Auto-Populating) Data Items

Auto-populating should be differentiated from pre-setting default values. Auto-populating a data item means replacing a blank field with a valid (non-unknown) value. Pre-setting default values occurs when registry software completes a data item with the standard value that indicates the data is not available.

A variety of decisions must be made prior to allowing auto-population of a data item. Each registry must make these decisions based on the level of EHR implementation, the quality of incoming event reports, cultural acceptance of auto-populating concepts, and other factors.

When the EHR is integrated more completely within a health care system, the quality of the data should be higher. There is one point of entry for most shared data items and the registry can take advantage of having access to that value. While errors in entry are harder to identify, the registry gains by not having to adjudicate discrepancies between data values entered by different departments.

Auto-populating critical data items that are used for patient linkage may result in patients being linked incorrectly. Care must be taken to ensure the patient linkage software is sensitive enough to identify patients accurately; this will allow auto-populating the demographic data items to be more accurate.

At the current time, auto-populating only blank, null, or unknown data item values is recommended. If a subsequent event report has a known value that is different from the value in the abstract, the registrar should review the abstract and resolve the discrepancy. It is important that the registrar notify the data source transmitting the wrong data item value so they can correct their record. As a quality assurance measure, event report data should become more accurate.

It is important not to lock an auto-populated data item. Items thought to be correct at any given time may prove to be false. This is especially true for the integrated EHR where a single point of entry can cause a typographical error that is replicated and therefore appears to be correct.

Data Items Required by the Commission on Cancer (CoC) NAACCR Record Layout Version 11.0

Demographics

Item No.	Item Name	Req?	Report to Use	Can Be Auto-Inserted?
550	Accession Number--Hosp	Yes	CR software	Yes
2230	Name--Last	Yes	Billing	Yes
2240	Name--First	Yes	Billing	Yes
2250	Name--Middle	Yes	Billing	Yes
2280	Name--Alias	No	Billing	Yes
2390	Name--Maiden	No	Billing	Yes
2300	Medical Record Number	Yes	Billing	Yes
2320	Social Security Number	Yes	Billing	Yes
1810	Addr Current--City	Yes	Billing	Yes
1820	Addr Current--State	Yes	Billing	Yes
1830	Addr Current--Postal Code	Yes	Billing	Yes
2355	Addr Current--Supplemental	Yes	Billing	Yes
2360	Telephone	Yes	Billing	Yes
2330	Addr at DX--No & Street	Yes	Billing – Dx facility	Yes

Item No.	Item Name	Req?	Report to Use	Can Be Auto-Inserted?
2335	Addr at DX--Supplementl	Yes	Billing – Dx facility	Yes
70	Addr at DX--City	Yes	Billing – Dx facility	Yes
80	Addr at DX--State	Yes	Billing – Dx facility	Yes
90	County at DX	Yes	Billing – Dx facility	Yes
100	Addr at DX--Postal Code	Yes	Billing – Dx facility	Yes
160	Race 1	Yes	Billing (Single race data)	Yes
161	Race 2	Yes	Multi-race data: Electronic Medical Record DB includes: • Admit registration form (face sheet) • Nursing assessment at admittance (but not coded)	No
162	Race 3	Yes		No
163	Race 4	Yes		No
164	Race 5	Yes		No
190	Spanish/Hispanic Origin	Yes	Multi-race data: Electronic Medical Record DB includes: • Admit registration form (face sheet) • Nursing assessment at admittance (but not coded)	No (depends on diversity of population – may not be coded)
220	Sex	Yes	Billing	Yes
230	Age at Diagnosis	Yes	CR software	Calculate
240	Birth Date	Yes	Billing	Yes
250	Birthplace	Yes	Multi-race data: Electronic Medical Record DB includes: • Admit registration form (face sheet) • Nursing assessment at admittance (but not coded)	Yes (if coded)

Facility

Item No.	Item Name	Req?	Report to Use	Can Be Auto-Inserted?
570	Abstracted By	Yes	As person logs in to system	Yes
580	Date of 1st Contact	Yes	Earliest electronic record (related to cancer)	Yes
630	Primary Payer at Diagnosis	Yes	Billing – primary payer can change quickly (self pay to Medicaid)	Yes
2440	Physician--Follow-Up	Yes		No
2470	Physician--Primary Surg	Yes	Operative report	Yes

Item No.	Item Name	Req?	Report to Use	Can Be Auto-Inserted?
2480	Physician 3	Yes		No (unless you have a consultation in hospital or if treated in facility)
2490	Physician 4	Yes		No (unless you have a consultation in hospital or if treated in facility)
3100	Archive FIN	Yes	Registry profile – information about registry (every hospital should have one)	Yes
2410	Institution Referred From	Yes		No
2420	Institution Referred To	Yes		No

Tumor Characteristics

Item No.	Item Name	Req?	Report to Use	Can Be Auto-Inserted?
560	Sequence Number--Hospital	Yes		No
390	Date of Diagnosis	Yes		No
400	Primary Site	Yes		No
410	Laterality	Yes	Synoptic pathology report	Yes
440	Grade	Yes	Synoptic pathology report	Yes
490	Diagnostic Confirmation	Yes	Pathology report type	Yes
522	Histologic Type ICD-O-3	Yes		No
523	Behavior Code ICD-O-3	Yes		No
610	Class of Case	Yes		

Stage/Prognostic Factors

Item No.	Item Name	Req?	Report to Use	Can Be Auto-Inserted?
759	SEER Summary Stage 2000	RH		No
760	SEER Summary Stage 1977	RH		No
780	EOD--Tumor Size	RH	Synoptic pathology report	Yes
820	Regional Nodes Positive	Yes	Synoptic pathology report	Yes
830	Regional Nodes Examined	Yes	Synoptic pathology report	Yes
880	TNM Path T	Yes	Synoptic pathology report	Yes
890	TNM Path N	Yes	Synoptic pathology report	Yes
900	TNM Path M	Yes		No
910	TNM Path Stage Group	Yes		No

Item No.	Item Name	Req?	Report to Use	Can Be Auto-Inserted?
920	TNM Path Descriptor	Yes		No
930	TNM Path Staged By	Yes		No
940	TNM Clin T	Yes		No
950	TNM Clin N	Yes		No
960	TNM Clin M	Yes		No
970	TNM Clin Stage Group	Yes		No
980	TNM Clin Descriptor	Yes		No
990	TNM Clin Staged By	Yes		No
1080	Date of 1st Positive BX	No	Pathology (RA)	Yes
1090	Site of Distant Met 1	No		No
1100	Site of Distant Met 2	No		No
1110	Site of Distant Met 3	No		No
1150	Tumor Marker 1	No		No
1160	Tumor Marker 2	No		No
1170	Tumor Marker 3	No		No
2800	CS Tumor Size	Yes		
2810	CS Extension	Yes		
2820	CS Tumor Size/Ext Eval	Yes		
2830	CS Lymph Nodes	Yes		
2840	CS Reg Node Eval	Yes		
2850	CS Mets at DX	Yes		
2860	CS Mets Eval	Yes		
2880	CS Site-Specific Factor 1	Yes	Synoptic pathology report	Yes depending on primary site
2890	CS Site-Specific Factor 2	Yes	Synoptic pathology report	Yes depending on primary site
2900	CS Site-Specific Factor 3	Yes	Synoptic pathology report	Yes depending on primary site
2910	CS Site-Specific Factor 4	Yes	Synoptic pathology report	Yes depending on primary site
2920	CS Site-Specific Factor 5	Yes	Synoptic pathology report	Yes depending on primary site
2930	CS Site-Specific Factor 6	Yes	Synoptic pathology report	Yes depending on primary site

Comorbid/Complications

Item No.	Item Name	Req?	Report to Use	Can Be Auto-Inserted?
3110	Comorbid/Complication 1	Yes	Claims, disease index?	Yes
3120	Comorbid/Complication 2	Yes	Claims, disease index?	Yes
3130	Comorbid/Complication 3	Yes	Claims, disease index?	Yes
3140	Comorbid/Complication 4	Yes	Claims, disease index?	Yes

Item No.	Item Name	Req?	Report to Use	Can Be Auto-Inserted?
3150	Comorbid/Complication 5	Yes	Claims, disease index?	Yes
3160	Comorbid/Complication 6	Yes	Claims, disease index?	Yes
3161	Comorbid/Complication 7	Yes	Claims, disease index?	Yes
3162	Comorbid/Complication 8	Yes	Claims, disease index?	Yes
3163	Comorbid/Complication 9	Yes	Claims, disease index?	Yes
3164	Comorbid/Complication 10	Yes	Claims, disease index?	Yes

Treatment First Course

Item No.	Item Name	Req?	Report to Use	Can Be Auto-Inserted?
670	RX Hosp--Surg Prim Site	Yes		To be determined
672	RX Hosp--Scope Reg LN Sur	Yes		To be determined
674	RX Hosp--Surg Oth Reg/Dis	Yes		To be determined
700	RX Hosp--Chemo	Yes		To be determined
710	RX Hosp--Hormone	Yes		To be determined
720	RX Hosp--BRM	Yes		To be determined
730	RX Hosp--Other	Yes		To be determined
740	RX Hosp--DX/Stg Proc	Yes		To be determined
1200	RX Date--Surgery	Yes		To be determined
3170	RX Date--Most Defin Surg	Yes		To be determined
3180	RX Date--Surgical Disch	Yes		To be determined
3190	Readm Same Hosp 30 Days	Yes		To be determined
1210	RX Date--Radiation	Yes		To be determined
3220	RX Date--Radiation Ended	Yes		To be determined
3230	RX Date--Systemic	Yes		To be determined
1250	RX Date--Other	Yes		To be determined
1270	Date of 1st Crs RX--COC	Yes		To be determined

Item No.	Item Name	Req?	Report to Use	Can Be Auto-Inserted?
1280	RX Date--DX/Stg Proc	Yes		To be determined
1290	RX Summ--Surg Prim Site	Yes		To be determined
1292	RX Summ--Scope Reg LN Sur	Yes		To be determined
1294	RX Summ--Surg Oth Reg/Dis	Yes		To be determined
1320	RX Summ--Surgical Margins	Yes		To be determined
1340	Reason for No Surgery	Yes		To be determined
1350	RX Summ--DX Stg Proc	Yes		To be determined
1380	RX Summ--Surg/Rad Seq	Yes		To be determined
3250	RX Summ--Transplnt/Endocr	Yes		To be determined
1390	RX Summ--Chemo	Yes		To be determined
1400	RX Summ--Hormone	Yes		To be determined
1410	RX Summ--BRM	Yes		To be determined
1420	RX Summ--Other	Yes		To be determined
1430	Reason for No Radiation	Yes		To be determined
1460	RX Coding System--Current	Yes		To be determined
1510	Rad--Regional Dose: CGY	Yes		To be determined
1520	Rad--No of Treatment Vol	Yes		To be determined
1540	Rad--Treatment Volume	Yes		To be determined
1550	Rad--Location of RX	Yes		To be determined
1570	Rad--Regional RX Modality	Yes		To be determined
3200	Rad--Boost RX Modality	Yes		To be determined
3210	Rad--Boost RX cGy	Yes		To be determined
1639	RX Summ--Systemic Sur Seq	Yes		To be determined

Item No.	Item Name	Req?	Report to Use	Can Be Auto-Inserted?
1646	RX Summ--Surg Site 98-02	RH		To be determined
1647	RX Summ--Scope Reg 98-02	RH		To be determined
1648	RX Summ--Surg Opth 98-02	RH		To be determined

Follow-Up/Recurrence/Death

Item No.	Item Name	Req?	Report to Use	Can Be Auto-Inserted?
1860	Recurrence Date--1st	Yes		No
1880	Recurrence Type--1st	Yes		No
1790	Follow-Up Source	Yes		No
1800	Next Follow-Up Source	Yes		No
1750	Date of Last Contact	Yes	Most recent electronic report	Yes
1760	Vital Status	Yes	Discharge data set	Yes
1770	Cancer Status	Yes		No

Derived

Item No.	Item Name	Req?	Report to Use	Can Be Auto-Inserted?
2940	Derived AJCC T	-	CR Software	Calculate
2950	Derived AJCC T Descriptor	-	CR Software	Calculate
2960	Derived AJCC N	-	CR Software	Calculate
2970	Derived AJCC N Descriptor	-	CR Software	Calculate
2980	Derived AJCC M	-	CR Software	Calculate
2990	Derived AJCC M Descripto	-	CR Software	Calculate
3000	Derived AJCC Sage Group	-	CR Software	Calculate
3010	Derived AJCC SS1977	-	CR Software	Calculate
3020	Derived AJCC SS2000	D	CR Software	Calculate
3030	Derived AJCC-Flag	-	CR Software	Calculate
3040	Derived SS1977--Flag	-	CR Software	Calculate
3050	Derived SS2000--Flag	-	CR Software	Calculate

Record ID

Item No.	Item Name	Req?	Report to Use	Can Be Auto-Inserted?
10	Record Type	-	CR Software	System
20	Patient ID Number	Yes	CR Software	System
40	Registry ID	-	CR Software	System
45	NPI--Registry ID	-	CR Software	System

Item No.	Item Name	Req?	Report to Use	Can Be Auto-Inserted?
50	NAACCR Record Version	-	CR Software	System
450	Site Coding Sys--Current	Yes	CR Software	System
460	Site Coding Sys--Original	-	CR Software	System
470	Morph Coding Sys--Current	Yes	CR Software	System
480	Morph Coding Sys--Original	-	CR Software	System
2140	COC Coding Sys--Current	-	CR Software	System
2150	COC Coding Sys--Original	-	CR Software	System
3165	ICD Revision Comorbid	-	Claims, Disease Index	Yes
2110	Date Case Report Exported	Yes	CR Software	System

Appendix E: Treatment Data Items and Instructions for Completion When No Treatment Is Given

Note: When all treatment is refused, all treatment or reason for no treatment codes are 7 or 87 (refused) to indicate that all treatment was refused (rather than specific, recommended treatment modalities refused).

No First Course Treatment of Any Kind Performed at Any Facility

Item No.	NAACCR Item Name	Code to Use If Treatment Not Given	Comments
1270	Date of 1st Crs RX--COC	00000000 or date	If a decision not to treat is made, the date of the decision is coded here.
3210	Rad--Boost Dose cGy	00000	
3200	Rad--Boost RX Modality	00	
1550	Rad--Location of RX	0	
1520	Rad--No of Treatment Vol	00	
1510	Rad--Regional Dose: CGY	00000	
1570	Rad--Regional RX Modality	00	
1540	Rad--Treatment Volume	00	
3190	Readm Same Hosp 30 Days	0	
1430	Reason for No Radiation	1, 2, 5–8	Requires specific coding when radiotherapy was not given
1340	Reason for No Surgery	1, 2, 5–8	Requires specific coding when surgery was not performed
1240	RX Date--BRM	00000000	
1220	RX Date--Chemo	00000000	Not required by CoC
1230	RX Date--Hormone	00000000	Not required by CoC
3170	RX Date--Most Defin Surg	00000000	
1250	RX Date--Other	00000000	
1210	RX Date--Radiation	00000000	
3220	RX Date--Radiation Ended	00000000	
1200	RX Date--Surgery	00000000	
3180	RX Date--Surgical Disch	00000000	
3230	RX Date--Systemic	00000000	
720	RX Hosp--BRM	00, 82, 85–88	Requires specific coding when BRM or immunotherapy was not given
1410	RX Summ--BRM	00, 82, 85–88	Requires specific coding when BRM or immunotherapy was not given
700	RX Hosp--Chemo	00, 82, 85–88	Requires specific coding when chemotherapy was not given
1390	RX Summ--Chemo	00, 82, 85–88	Requires specific coding when chemotherapy was not given
710	RX Hosp--Hormone	00, 82, 85–88	Requires specific coding when hormone therapy was not given

Item No.	NAACCR Item Name	Code to Use If Treatment Not Given	Comments
1400	RX Summ--Hormone	00, 82, 85–88	Requires specific coding when hormone therapy was not given
730	RX Hosp--Other	0, 7, 8	Requires specific coding when other treatment was not given, but will nearly always be 0
1420	RX Summ--Other	0, 7, 8	Requires specific coding when other treatment was not given, but will nearly always be 0
3280	RX Hosp--Palliative Proc	0	
3270	RX Summ--Palliative Proc	0	
1360	RX Summ--Radiation	00	
672	RX Hosp--Scope Reg LN Sur	0 or 9	9 applies to lymphomas (M-9590–9596, 9650–9719, 9727–9729) with a lymph node primary site (C77.0–C77.9); unknown or ill-defined primary site (C76.0–C76.8, C80.9) or for hematopoietic, reticuloendothelial, immunoproliferative, or myeloproliferative disease (C42.0, C42.1, C42.3, C42.4 or M-9750, 9760–9764, 9800–9820, 9826, 9831–9920, 9931–9964, 9980–9989)
1292	RX Summ--Scope Reg LN Sur	0 or 9	9 applies to lymphomas (M-9590–9596, 9650–9719, 9727–9729) with a lymph node primary site (C77.0–C77.9); unknown or ill-defined primary site (C76.0–C76.8, C80.9) or for hematopoietic, reticuloendothelial, immunoproliferative, or myeloproliferative disease (C42.0, C42.1, C42.3, C42.4 or M-9750, 9760–9764, 9800–9820, 9826, 9831–9920, 9931–9964, 9980–9989)
674	RX Hosp--Surg Oth Reg/Dis	0	
1294	RX Summ--Surg Oth Reg/Dis	0	
670	RX Hosp--Surg Prim Site	00 or 98	98 applies to hematologic cases (C42.0, C42.1, C42.3, C42.4 and/or M-9750, 9760–9764, 9800–9820, 9826, 9831–9920, 9931–9964, 9980–9989); unknown and ill-defined primary sites (C76._ and C80.9)
1290	RX Summ--Surg Prim Site	00 or 98	98 applies to hematologic cases (C42.0, C42.1, C42.3, C42.4 and/or M-9750, 9760–9764, 9800–9820, 9826, 9831–9920, 9931–9964, 9980–9989); unknown and ill-defined primary sites (C76._ and C80.9)
1380	RX Summ--Surg/Rad Seq	0	
1320	RX Summ--Surgical Margins	0	
1639	RX Summ--Systemic/Sur Seq	0	
3250	RX Summ--Transplnt/Endocr	00, 82, 85–88	Requires specific coding when procedure was not done

No First Course Treatment of Any Kind Performed at This Facility; Treated Elsewhere

Item No.	NAACCR Item Name	Code to Use If Treatment Not Given	Comments
672	RX Hosp--Scope Reg LN Sur	0 or 9	9 applies to lymphomas (M-9590–9596, 9650–9719, 9727–9729) with a lymph node primary site (C77.0–C77.9); unknown or ill-defined primary site (C76.0–C76.8, C80.9) or for hematopoietic, reticuloendothelial, immunoproliferative, or myeloproliferative disease (C42.0, C42.1, C42.3, C42.4 or M-9750, 9760–9764, 9800–9820, 9826, 9831–9920, 9931–9964, 9980–9989)
674	RX Hosp--Surg Oth Reg/Dis	0	
670	RX Hosp--Surg Prim Site	00 or 98	98 applies to hematologic cases (C42.0, C42.1, C42.3, C42.4 and/or M-9750, 9760–9764, 9800–9820, 9826, 9831–9920, 9931–9964, 9980–9989); unknown and ill-defined primary sites (C76._ and C80.9)
1550	Rad--Location of RX	0 or 4	0 = no radiotherapy, 4 = all radiotherapy given elsewhere
720	RX Hosp--BRM	00, 82, 85–88	Requires specific coding when BRM or immunotherapy was not given
700	RX Hosp--Chemo	00, 82, 85–88	Requires specific coding when chemotherapy was not given
710	RX Hosp--Hormone	00, 82, 85–88	Requires specific coding when hormone therapy was not given
3250	RX Summ--Transplnt/Endocr	00, 82, 85–88	Requires specific coding when procedure was not done
730	RX Hosp--Other	0, 7, 8	Requires specific coding when other treatment was not given, but will nearly always be 0

No Surgical Treatment of Any Kind Performed at Any Facility

Item No.	NAACCR Item Name	Code to Use If Treatment Not Given	Comments
1200	RX Date--Surgery	00000000	
3170	RX Date--Most Defin Surg	00000000	
3180	RX Date--Surgical Disch	00000000	
3190	Readm Same Hosp 30 Days	0	
672	RX Hosp--Scope Reg LN Sur	0 or 9	9 applies to lymphomas (M-9590–9596, 9650–9719, 9727–9729) with a lymph node primary site (C77.0–C77.9); unknown or ill-defined primary site (C76.0–C76.8, C80.9) or for hematopoietic, reticuloendothelial, immunoproliferative, or myeloproliferative disease (C42.0, C42.1, C42.3, C42.4 or M-9750, 9760–9764, 9800–9820, 9826, 9831–9920, 9931–9964, 9980–9989)

Item No.	NAACCR Item Name	Code to Use If Treatment Not Given	Comments
1292	RX Summ--Scope Reg LN Sur	0 or 9	9 applies to lymphomas (M-9590–9596, 9650–9719, 9727–9729) with a lymph node primary site (C77.0–C77.9); unknown or ill-defined primary site (C76.0–C76.8, C80.9) or for hematopoietic, reticuloendothelial, immunoproliferative, or myeloproliferative disease (C42.0, C42.1, C42.3, C42.4 or M-9750, 9760–9764, 9800–9820, 9826, 9831–9920, 9931–9964, 9980–9989)
674	RX Hosp--Surg Oth Reg/Dis	0	
1294	RX Summ--Surg Oth Reg/Dis	0	
670	RX Hosp--Surg Prim Site	00 or 98	98 applies to hematologic cases (C42.0, C42.1, C42.3, C42.4 and/or M-9750, 9760–9764, 9800–9820, 9826, 9831–9920, 9931–9964, 9980–9989); unknown and ill-defined primary sites (C76._ and C80.9)
1290	RX Summ--Surg Prim Site	00 or 98	98 applies to hematologic cases (C42.0, C42.1, C42.3, C42.4 and/or M-9750, 9760–9764, 9800–9820, 9826, 9831–9920, 9931–9964, 9980–9989); unknown and ill-defined primary sites (C76._ and C80.9)
1340	Reason for No Surgery	1, 2, 5–8	Requires specific coding when surgery was not performed

No Surgical Treatment of Any Kind Performed at This Facility, Surgery Peformed Elsewhere

Item No.	NAACCR Item Name	Code to Use If Treatment Not Given	Comments
672	RX Hosp--Scope Reg LN Sur	0 or 9	9 applies to lymphomas (M-9590–9596, 9650–9719, 9727–9729) with a lymph node primary site (C77.0–C77.9); unknown or ill-defined primary site (C76.0–C76.8, C80.9) or for hematopoietic, reticuloendothelial, immunoproliferative, or myeloproliferative disease (C42.0, C42.1, C42.3, C42.4 or M-9750, 9760–9764, 9800–9820, 9826, 9831–9920, 9931–9964, 9980–9989)
674	RX Hosp--Surg Oth Reg/Dis	0	
670	RX Hosp--Surg Prim Site	00 or 98	98 applies to hematologic cases (C42.0, C42.1, C42.3, C42.4 and/or M-9750, 9760–9764, 9800–9820, 9826, 9831–9920, 9931–9964, 9980–9989); unknown and ill-defined primary sites (C76._ and C80.9)

No Radiotherapy Given Anywhere

Item No.	NAACCR Item Name	Code to Use If Treatment Not Given	Comments
3210	Rad--Boost Dose cGy	00000	
3200	Rad--Boost RX Modality	00	
1550	Rad--Location of RX	0	
1520	Rad--No of Treatment Vol	00	
1510	Rad--Regional Dose: CGY	00000	
1570	Rad--Regional RX Modality	00	
1540	Rad--Treatment Volume	00	

No Radiotherapy Given at This Facility; Radiotherapy Done Elsewhere

Item No.	NAACCR Item Name	Code to Use If Treatment Not Given	Comments
1550	Rad--Location of RX	4	

No Systemic Therapy of Any Kind Anywhere

Item No.	NAACCR Item Name	Code to Use If Treatment Not Given	Comments
3230	RX Date--Systemic	00000000	
1240	RX Date--BRM	00000000	
1220	RX Date--Chemo	00000000	Not required by CoC
1230	RX Date--Hormone	00000000	Not required by CoC
720	RX Hosp--BRM	00, 82, 85-88	Requires specific coding when BRM or immunotherapy was not given
1410	RX Summ--BRM	00, 82, 85-88	Requires specific coding when BRM or immunotherapy was not given
700	RX Hosp--Chemo	00, 82, 85-88	Requires specific coding when chemotherapy was not given
1390	RX Summ--Chemo	00, 82, 85-88	Requires specific coding when chemotherapy was not given
710	RX Hosp--Hormone	00, 82, 85-88	Requires specific coding when hormone therapy was not given
1400	RX Summ--Hormone	00, 82, 85-88	Requires specific coding when hormone therapy was not given
3250	RX Summ--Transplnt/Endocr	00, 82, 85-88	Requires specific coding when procedure was not done

No Systemic Therapy of Any Kind at This Facility; Systemic Therapy Given Elsewhere

Item No.	NAACCR Item Name	Code to Use If Treatment Not Given	Comments
720	RX Hosp--BRM	00, 82, 85–88	Requires specific coding when BRM or immunotherapy was not given
700	RX Hosp--Chemo	00, 82, 85–88	Requires specific coding when chemotherapy was not given
710	RX Hosp--Hormone	00, 82, 85–88	Requires specific coding when hormone therapy was not given

No Chemotherapy Anywhere

Item No.	NAACCR Item Name	Code to Use If Treatment Not Given	Comments
1220	RX Date--Chemo	00000000	Not required by CoC
700	RX Hosp--Chemo	00, 82, 85–88	Requires specific coding when chemotherapy was not given
1390	RX Summ--Chemo	00, 82, 85–88	Requires specific coding when chemotherapy was not given

No Hormone Therapy Anywhere

Item No.	NAACCR Item Name	Code to Use If Treatment Not Given	Comments
1230	RX Date--Hormone	00000000	Not required by CoC
710	RX Hosp--Hormone	00, 82, 85–88	Requires specific coding when hormone therapy was not given
1400	RX Summ--Hormone	00, 82, 85–88	Requires specific coding when hormone therapy was not given

No BRM (Immunotherapy) Anywhere

Item No.	NAACCR Item Name	Code to Use If Treatment Not Given	Comments
720	RX Hosp--BRM	00, 82, 85–88	Requires specific coding when BRM or immunotherapy was not given
1410	RX Summ--BRM	00, 82, 85–88	Requires specific coding when BRM or immunotherapy was not given

No Transplant or Endocrine Surgery Procedure Anywhere

Item No.	NAACCR Item Name	Code to Use If Treatment Not Given	Comments
3250	RX Summ--Transplnt/Endocr	00, 82, 85–88	Requires specific coding when procedure was not done

No "Other" Treatment Anywhere

Item No.	NAACCR Item Name	Code to Use If Treatment Not Given	Comments
1250	RX Date--Other	00000000	
730	RX Hosp--Other	0, 7, 8	Requires specific coding when other treatment was not given, but will nearly always be 0
1420	RX Summ--Other	0, 7, 8	Requires specific coding when other treatment was not given, but will nearly always be 0

Appendix F: Abstract Sections and Data Elements Required for Status to Be Complete

Section of Abstract	Data Items That Must Be Present for Section to Be Marked Complete
Demographics	• Medical Record Number • Patient Name • Social Security Number • Date of Birth • Sex • Address at Diagnosis • Race
Full Diagnostic	• Diagnosis Date • Primary Site • Laterality • Histology • Behavior Code • Grade • Diagnostic Confirmation
Stage of Disease	• Derived Collaborative Stage • AJCC Pathologic Stage • AJCC Clinical Stage
Treatment at This Facility	• Full First Course of Treatment
Follow-Up Initiated or Complete	
Follow-Up through First Recurrence	
Subsequent Treatment	
Other or Registry-Specific Data	

Data item set includes:

- *_completion flag: Indication of whether the section is complete.
  - 0 = not complete.
  - 1 = complete.
  - 8 = not applicable.
- *_comments field: Text field for the registrar to record comments about the completion status (example: what needs to be done to complete the section).
- *_reminder date: Registrar-entered date for prompting the registrar to follow up on action items in the comments field.
- *_timestamp: Date when the comments were added or updated, or when the completion flag was set to complete.

Example:

- demographics_completion_flag
- demographics_comments
- demographics_reminder_date
- demographics_completion_timestamp

Note: * indicates the name of the abstract section.

Appendix G: Abstract Reporting/Endpoint Triggers

To be determined in collaboration with the NPCR–MERP Central Cancer Registry Workgroup.

Use Case Administrative Information

1. Use Case History

Version 0.01 presented to the NPCR–MERP Hospital Workgroup November 28, 2006 as an overview.

2. Created By

- NPCR–MERP Hospital Workgroup
- NPCR–MERP Technical Development Team

3. Date Created

November 27, 2006

4. Last Updated By

WKS, MA

5. Date Last Updated

October 22, 2007

Revision History

Name	Date	Reason for Changes	Version
WKS	11/28/06	Expanded section 5.0, Normal Course of Events, based on workgroup discussion	0.02
WKS	12/20/06	Expanded section 5.0, Normal Course of Events, based on workgroup discussion	0.03
WKS, MA	5/14/07	Changed business rules	0.04
MA	5/15/07	Changed business rules	0.05
Hospital Workgroup	5/22/07	Reviewed and revised steps and business rules	0.06
WKS, MA	5/25/07	Reviewed business rules and added Software Requirements Table	0.07
WKS, MA	6/18/07	Added workflow diagram, completed data requirements and auto-population sections	0.08
WKS, MA	6/19/07	Updated the business rules and Alternate Course of Events	0.08
WKS, MA	8/1/07	Updated the appendices and formatting changes, finalized the use case	0.09
WKS, MA	10/22/07	Formatted document and updated business rules and software requirements	0.10